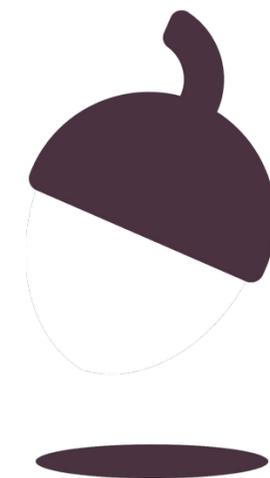


Acceleration

Mr Saville



OAK
NATIONAL
ACADEMY



Practice

1. A car accelerates from rest to 50 m/s in 5 seconds. What is the car's acceleration?
2. At the start of a race, a sprinter accelerates from rest to 10 m/s in 2 seconds. What is the acceleration of the sprinter?
3. A plane flying at a steady speed of 100 m/s accelerates to 150 m/s in 10 seconds. What is the plane's acceleration?
4. At a set of traffic lights, a lorry slows down from 30 m/s to 0 m/s in 20 seconds. What is the deceleration of the lorry?
5. A cyclist travelling at a steady speed of 20 m/s decelerates to 5 m/s in 3 seconds when the brakes are applied. What is the deceleration of the cyclist?



Acceleration - You Do

	A plane travelling at 15 m/s accelerates at a rate of 5 m/s ² for 7 seconds. Calculate the plane's final velocity.
V alues	
E quation	
S ubstitute	
R earrange	
A nswer	
U nits	



Independent task

1. An object is accelerated over 10 m uniformly from rest to a speed of 15 m/s. Find its acceleration?
2. A particle is accelerated from 1 m/s to 5 m/s over a distance of 15 m. Find the acceleration.
3. A car accelerates uniformly from rest and covers 40 m. If the acceleration is 0.55 m/s^2 , what is its final velocity?
4. A car accelerates uniformly at a rate of 2 m/s^2 from 15m/s on a motorway sliproad that is 200 m long. Calculate the speed the car will be at when he merges onto the motorway. Give your answer to 2 significant figures

